

What is claimed is:

1. A vehicle driving system comprising:
 - a synchronizing shaft synchronously rotating with a crankshaft of an engine;
 - a drive shaft driving an auxiliary unit;
 - a planetary gear mechanism having elements such as a sun gear, a pinion carrier and a ring gear, said synchronizing shaft and said drive shaft connecting to any two of said elements of said planetary gear mechanism, respectively;
 - a motor connecting to a remaining element of said planetary gear mechanism;
 - a connecting device for connecting together said two or more elements of said planetary gear mechanism; and
 - a rotation restricting mechanism for restricting the rotation of the drive shaft in one direction,wherein said planetary gear mechanism, said motor, said connecting device and said drive shaft are coaxially disposed in line.
2. The vehicle driving system according to any of claims 1 and 2, wherein said connecting means, said motor, said planetary gear mechanism and said drive shaft are disposed in that order.

3. The vehicle driving system according to claim 1, wherein said planetary gear mechanism is a single pinion planetary gear mechanism in which said synchronizing shaft, said pinion carrier and said drive shaft are connected to the pinion carrier, the sun gear and the ring gear, respectively,

wherein said connecting device and said planetary gear mechanism are disposed adjacent to said motor, respectively, such that said motor is hold between said connecting device and said planetary gear mechanism,

wherein said connecting device is disposed one side of said motor, and said planetary gear mechanism is disposed on the other side of said motor with the drive shaft being disposed adjacent to said planetary gear mechanism at a location thereof which is opposite to a location where the motor is disposed.

4. The vehicle driving system according to any of claims 1 to 3, wherein a pulley is provided on said synchronizing shaft, and said connecting device is disposed in the interior of the pulley.

5. The vehicle driving system according to any of claims 1 to 4, wherein the rotation restricting means is disposed adjacent to the planetary gear mechanism.

6. The vehicle driving system according to any of claims 1 to 5, wherein said drive shaft and said auxiliary unit are disposed on different axes.